

## REMARKS

### I. Amendments to the Claims

By the foregoing amendments to the claims, claims 1 and 21 have been amended, claims 2-20 and 24-27 have been canceled, and new claim 28 has been added.

In particular, claim 1 has been amended to recite the subject matter of claims 10, 11 and 20.

Claim 1 has been further amended by deleting "hydrogen" and "alkenyl" from the definition of R1, and by defining two of R2, R3, and R4 as "a residue formed by reacting glucose pentaacetate with a hydroxyl group of an alkyl gallate."

In addition, claim 1 has been amended by replacing the phrase "a compound having at least two phenolic hydroxyl groups in its molecule" to "an alkyl gallate having a C<sub>1</sub>-C<sub>10</sub> straight or branched alkyl."

Finally, claim 1 has been amended to recite that organic solvent, and acetic acid formed during the reaction, are removed from the reaction system such that the concentration of the acetic acid in the reaction system is maintained at 1.0 percent by weight or less during the reaction (*see, e.g.*, page 18 of the present specification).

New claim 28 is directed to the method of claim 1, wherein the organic solvent and the acetic acid are removed from the reaction system by distillation (*id.*).

The amendments to the claims, including cancellation of claims, have been made without prejudice or disclaimer to any subject matter recited or canceled herein. Applicants reserve the right to file one or more continuation and/or divisional applications directed to any canceled subject matter. No new matter has been added, and entry of the foregoing amendments of the above-identified application are respectfully requested.

## **II. Response to Claim Rejections Under 35 U.S.C. §112, Second Paragraph**

Claims 1-4 and 10-27 have been rejected under 35 U.S.C. § 112, second paragraph, as purportedly indefinite for the reasons set forth at pages 2-3 of the Office Action.

Applicants submit that claim 1, as amended herein, particularly points out and distinctly claims the subject matter Applicants regard as the invention. In particular, the starting material is clear and consistent with the end product.

In addition, claims 2 and 11 have been canceled, rendering the Examiner's concerns with regard to these claims moot.

Accordingly, Applicants respectfully request reconsideration and withdrawal of this rejection.

## **III. Response to Claim Rejection Under 35 U.S.C. § 102**

Claims 1-2 and 4 have been rejected under 35 U.S.C. § 102(b) as purportedly being anticipated by Toshiyuki et al., JP 62-263194 (English translation). This rejection is respectfully traversed.

It is well established that for prior art to be anticipatory, every element of the claimed invention must be disclosed in a single item of prior art in the form literally defined in the claim. See, e.g., *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 213 U.S.P.Q. 81, 90 (Fed. Cir. 1986). Applicants submit that Toshiyuki et al. fails to satisfy this requirement, for at least the following reasons.

To expedite prosecution in the present application, and not to acquiesce to the Examiner's rejection, the claims have been amended as described above. In particular, claim 1 has been amended by incorporating the subject matter of claims 10, 11, and 20. Claim 1 has also been amended to recite that the concentration of the acetic acid in the reaction

system is maintained at 1.0 percent by weight or less during the reaction. Claims 10, 11, and 20 have not been included in this rejection. Further, Toshiyuki et al. does not teach or even suggest each and every limitation recited in the amended claims.

In view of the above, Applicants respectfully request reconsideration and withdrawal of this rejection.

### **III. Response to Claim Rejection Under 35 U.S.C. § 103**

Claims 2-4 and 10-27 have been rejected under 35 U.S.C. §103(a) as being purportedly unpatentable over Toshiyuki et al. in view of Yujiro et al., JP 2000-319116 (English Translation). This rejection is respectfully traversed.

The present inventors have found that a number of problems arise during the production of a glycoside (particularly a diglycoside). These problems include problems related to the equilibrium between monoglycoside and diglycoside in the presence of acetic acid. In particular, if acetic acid is added to a diglycoside, the diglycoside will be dissociated into monoglycoside and acetylated sugar. The present inventors also discovered that the phenolic hydroxyl groups of the phenol compounds used as starting material in the production of diglycosides are acetylated in the presence of monoglycoside and acetic acid, resulting in a reaction mixture that can no longer yield diglycoside. (*See, e.g.*, pages 4-5 of the specification for more detail).

Thus, considering the equilibrium alone, it would be reasonable to expect that adjusting the equilibrium between monoglycoside and diglycoside would improve the yield of diglycoside. However, the present inventors have unexpectedly found that adjusting the equilibrium does not have the desired effect, because the acetylation reaction occurs under equilibrium conditions. Furthermore, the present inventors have surprisingly found that the

problematic acylation reaction can be suppressed by removing the acetic acid generated in the reaction system as the reaction progresses, thereby maintaining the concentration of the acetic acid at a specific level.

Neither Toshiyuki et al. nor Yujiro et al., taken alone or in combination, teach or suggest that the undesirable acylation reaction might occur in the equilibrium system between monoglycoside and diglycoside. In addition, the references do not teach or suggest that such an undesirable reaction could be suppressed by minimizing the concentration of the acetic acid generated as a byproduct.

Accordingly, the cited references do not teach or suggest the subject matter of the present application, and Applicants respectfully request reconsideration and withdrawal of this rejection.

**CONCLUSION**

From the foregoing, further and favorable action in the form of a Notice of Allowance is respectfully requested and such action is earnestly solicited.

In the event that there are any questions concerning this amendment or the application in general, the Examiner is respectfully requested to telephone the undersigned so that prosecution of the application may be expedited.

Respectfully submitted,

BUCHANAN INGERSOLL & ROONEY PC

Date: January 7, 2008

By:

A handwritten signature in black ink, appearing to read "Lisa E. Stahl", written over a horizontal line.

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